

# **REMARKS**

## **I. Claim Changes**

New compound claim 11 claims a more limited group of N-aryl-4,5-diaminopyrazole compounds of the same structural formula I than canceled claim 1. The recited substituent groups for the compounds of formula I are fewer in number and more limited than those of canceled claim 1. These changes have been made considering the disclosures in additional prior art, which is being filed with an Information Disclosure Statement, as well as the prior art of record.

This significant prior art includes U.S. Published Patent Application US 2004/0255397 A1, of December 23, 2004, which is acting as an English translation of WO 03/008405 A, which was published January 30, 2003 and which was filed with the previously filed and acknowledged Information Disclosure Statement. In addition the claim changes have been made considering the disclosures in DE 200 13 156 of November 23, 2000, which is of record.

No changes were made in the definition of the R1 and R2 groups in the new main compound claim 11, except that "H" has been deleted from the first paragraph following formula I and the proviso wording has been changed to limit the number of embodiments in which R1 and/or R2 can be hydrogen.

Furthermore R3 in claim 11 **does not** denote a halogen atom, an alkyl group, a hydroxyalkyl group, or an alkoxy group as in canceled claim 1.

According to the invention claimed in new claim 11 R3 can only be H, an alkoxyalkoxy group, or a hydroxyalkoxy group.

Note particularly that compounds according to the invention claimed in the new claim 11 must have at least two substituents that are not hydrogen on the phenyl group attached to the 1H position of the pyrazole ring or if there is only one substituent on the phenyl group, it must be an unsubstituted amino group in the 4 position of the phenyl group.

The same dye compound limitations are present in new colorant composition claim 15 and new ready-to-apply dye mixture claim 18 as described above for new compound claim 11.

## **II. Rejections based on Braun**

### **1. Anticipation**

Claims 1 to 10 were rejected under 35 U.S.C. 102 (b) as anticipated by Braun (US Published Patent Application 2001/0009044 A1).

New claims 11 to 20 have been added and claims 1 to 10 have been canceled, obviating this anticipation rejection. New claim 11 contains additional features and limitations that distinguish it further from the prior art including Braun.

Braun (US '044) does **not** disclose **any** of the substituted N-phenyl-4,5-

diaminopyrazoles or substituted 1-phenyl-1H-4,5-diaminopyrazoles of formula I of new claim 11. In paragraphs 0010 and 0014 Braun discloses 1-**benzyl**-1H-4,5-diaminopyrazole and 1-**4'-methylbenzyl**-1H-4,5-diaminopyrazole.

Thus there are two reasons that 1-**4'-methylbenzyl**-1H-4,5-diaminopyrazole does not anticipate any of the compounds claimed in claim 11. The first is that the group attached to the nitrogen of the pyrazole ring is a benzyl group, not a phenyl group. In contrast in the case of the compounds of new claim 11 the methylene group is not present between the phenyl group and the nitrogen of the pyrazole ring; the substituted phenyl group is attached directly to the nitrogen of the pyrazole ring.

The second reason is that the aryl (phenyl) group in the compounds of claim 11 must have at least two substituents that are not hydrogen except when the aryl group has a single unsubstituted amino group attached thereto.

It is well established that each and every limitation of a claimed invention must be disclosed in a single prior art reference in order to be able to reject the claimed invention under 35 U.S.C. 102 (b) based on the disclosures in the single prior art reference. See M.P.E.P. 2131 and also the opinion in *In re Bond*, 15 U.S.P.Q. 2<sup>nd</sup> 1566 (Fed. Cir. 1990).

For the foregoing reasons it is respectfully submitted that none of the new claims 11 to 20 should be rejected under 35 U.S.C. 102 (b) as anticipated by Braun (US Published Patent Application 2001/0009044 A1).

## 2. Obviousness

Claims 11 to 12 should **not** be rejected under 35 U.S.C. 103 (a) as obviousness by Braun (US Published Patent Application 2001/0009044 A1).

The compound of new claim 11 in which Y is a CH group and R<sub>2</sub> is an amino group in the 4'-position would have entirely different properties and behave entirely differently from the disclosed 1-4'-methylbenzyl-1H- 4,5-diaminopyrazole, because the amino group is a hydrophilic basic group, whereas the 4'-methyl group is a hydrophobic group that has different effects on the benzene ring of the phenyl group.

Furthermore the compound of new claim 11 in which Y is a CH group and R<sub>2</sub> is an amino group in the 4' position is neither an isomer nor homologous with the relevant compound disclose in paragraphs 0010 and 0014, namely 1-(4'-methylbenzyl)-1H-4,5-diaminopyrazole.

Thus there is no structural basis for a finding that the compound in which Y is a CH group and R<sub>2</sub> is an amino group is obvious from the relevant compound in Braun.

The other relevant compounds of new claim 11 must have one other substituent on the phenyl group besides the 4-methyl substituent and thus the same argument may be made: they are not isomeric or homologous with 1-(4'-methylbenzyl)-1H-4,5-diaminopyrazole.

Thus there is no suggestion in the prior art to modify the disclosure of 1-(4'-methylbenzyl)-1H-4,5-diaminopyrazole in Braun to obtain the compounds of

applicants' new claim 11 and of course the other claims 12 to 20 as well.

Many US judicial opinions hold that there must be some hint or suggestion in the prior art of the modifications of the disclosures in a prior art reference or references that are necessary to arrive at a claimed invention for a valid obviousness rejection under 35 U.S.C. 103 (a). For example, the Court of Appeals for the Federal Circuit has said:

"Rather, to establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant...Even when obviousness is based on a single reference there must be a showing of a suggestion of motivation to modify the teachings of that reference.."*In re Kotzab*, 55 U.S.P.Q. 2<sup>nd</sup> 1313 (Fed. Cir. 2000). See also M.P.E.P. 2141

In the present case there must be a hint or suggestion of two particular structural modifications (dispensing with a methylene group and adding a substituent to the phenyl group or changing a methyl group to an amino group) to arrive at a new compound claimed in new claim 11 from the 1-(4'-methylbenzyl)-1H- 4,5-diaminopyrazole of Braun.

For the foregoing reasons it is respectfully submitted that Braun does not establish a case of *prima facie* obviousness of the new claims 11 to 20 of the above-identified U.S. Patent Application and cannot be used to reject the claimed invention under 35 U.S.C. 103 (a).

### **III. The Closest Prior Art**

WO 03/008405 discloses prior art compounds that are closer to the compounds of the canceled claim 1 than those disclosed by Braun. Although WO 03/008405 is in the French language, U.S. Published Patent Application 2004/0255397 (U.S. '397) is essentially an English translation of WO 03/008405. A copy of this published patent application is being filed with an Information Disclosure Statement that accompanies this amendment. Its consideration is respectfully requested.

WO 03/008405 is material to the compounds of canceled claim 1 in which Y = N. Canceled claim 1 of the present application claims a compound of claim 23 of U.S. '397, namely 2-pyridin-2-yl-2H-3, 4-diaminopyrazole, when R1 = R2 = H and Y = N in canceled claim 1. 2-pyridin-2-yl-2H-3, 4-diaminopyrazole is also disclosed in paragraph 0026 and its synthesis is described in paragraph 0084 of U.S. '397.

However new claim 11 has been drafted to avoid claiming compounds in which Y = N. In all case the compounds of claims 11 and also in claims 12 to 20 Y = CH. Also none of the compounds of WO '405 are either isomeric with or homologous with any of the compounds claimed in new claim 11.

Thus WO '405 cannot establish a case of *prima facie* obviousness of any of new claims 11 to 20.

DE 200 13 156 U1 (DE '156), which was filed with the previous

acknowledged information disclosure statement, is in the German language.

However its consideration is also requested to the extent possible based on the chemical formulae, figures, etc, which do not require an extensive knowledge of the German language to understand. In fact, the U.S. Patent Office Rules related to submission of prior art with an information disclosure statement state in 37 C.F.R. 1.98 (a) (3) that:

- (i) A concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. The concise explanation may be either separate from applicant's specification or incorporated therein.
- (ii) A copy of the translation if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody, or control of, or is readily available to any individual designated in § 1.56(c)."

Furthermore according to M.P.E.P. 609::

"If no translation is submitted, the Examiner will consider the information in view of the concise explanation and insofar as it is understood on its face, e.g. drawings, chemical formulas ..." See also: M.P.E.P. Sec. 609 A (3)

In other words, an English translation is not an absolute requirement for consideration of information in a foreign reference in a foreign language. Examiner is encouraged to consider claim 4 of the above-mentioned DE reference to the extent possible in view of the chemical formulae for the compounds recited in claim 4. The German words for the claimed compounds in claim 4 of the DE reference are the same as the English words, except that they drop the final "e" in the term "pyrazol". Thus there should be no comprehension problem for an individual who only understands English and not German.

Furthermore an additional explanation of the content of the DE reference is provided hereinbelow. Be advised also the this DE reference was found to be an "X" reference in the International Search of the Prior Art as evidenced by the International Search Report of August 19, 2003. This can be seen by one who only understands English even in the German language version of the International Search Report. The search report clearly shows that the compounds disclosed in this reference are relevant and should be considered. The exemplary compounds of dependent claim 4 are especially relevant

Furthermore claim 1 of this DE reference is a composition claim that includes a 4,5-diaminopyrazole compound of formula II. In the case of formula II the aryl group can be a phenyl group substituted with a halogen atom, an alkyl group, a hydroxyl alkyl group, or an alkoxy group.

Furthermore claim 4 of DE 200 13 156 U1 also discloses 1-(4'-chlorophenyl)-1H-4,5-diaminopyrazole, 1-(4'-chlorophenyl)-1H-4,5-diaminopyrazole, 1-(4'-methylphenyl)-1H-4,5-diaminopyrazole, and 1-(4'-methoxyphenyl)-1H-4,5-diaminopyrazole. These compounds would all be claimed by the canceled claim 1 and thus claim 1 would be anticipated by the disclosures in claim 4 of DE 200 13 156.

However the new claim 11 only claims one compound in which there is only a single substituent on the phenyl group connected to the nitrogen of the pyrazole ring and that substituent is an amino group. This latter compound is not disclosed or suggested by DE 200 13 156 U1.

For the foregoing reasons it is respectfully submitted that new claims 11 to

20 are not anticipated under 35 U.S.C. 102 (b) by, or alternatively obvious under 35 U.S.C. 103 (a) over, the disclosures in either DE 200 13 156 U1 (DE '156) or WO 03/008405.

**IV. Comparative Evidence filed in the Accompanying Declaration**

**Shows that claims 11 to 20 are not obvious from DE 200 13 156 U1**

Experimental measurements of light fastness and bleeding of dyed hair colors for hair samples dyed with examples of the N-aryl-4,5-diaminopyrazole compounds claimed in the new claim 11 and the closest prior art exemplary N-aryl-4,5-diaminopyrazole compounds of DE '156 are reported in the accompanying unsigned Declaration (A signed copy will be filed as soon as possible).

The compounds tested from DE '156 were 1-(4'-methylphenyl)-4,5-diamino-1H-pyrazole dihydrochloride, 1-(4'-methoxyphenyl)-4,5-diamino-1H-pyrazole dihydrochloride, and 1-(4'-chlorophenyl)-4,5-diamino-1H-pyrazole hemisulfate. The closest corresponding compounds of the new claim 11 of the present application, which have di-substituted phenyl groups, were 1-(2,4-dimethylphenyl)-4,5-diamino-1H-pyrazole dihydrochloride, 1-(2,5-dimethylphenyl)-4,5-diamino-1H-pyrazole dihydrochloride, and 1-(4-aminophenyl)-4,5-diamino-1H-pyrazole sulfate (1:1). It is easy to see that the latter compounds would be the closest compounds to those listed above from DE '156, claim 4.

The results for the color differences before and after treatment in both cases clearly prove the unexpected superiority of the compounds of the claimed invention as claimed in new claim 11 and the dependent claims.

According to the conclusion in the Declaration the tabulated results for L, a, b and  $\Delta E$  clearly show that the dyed hair colors of hair samples dyed with the colorant compositions according to the invention claimed in claim 11 and following of the accompanying amendment have **unexpectedly and surprisingly improved** color fastness to exposure to light and bleeding properties in comparison the dyed hair colors obtained by dyeing with hair colorant compositions of the closest prior art.

This would overcome any case of *prima facie* obviousness based on DE '156.

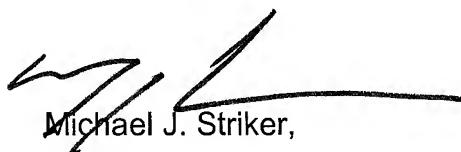
The comparative evidence in the Declaration clearly shows unexpected results in accordance with MPEP 716.02 (a) and comparison is made with the closest prior art in accordance with MPEP 716.02 (e). Furthermore both the compounds of claim 11 with the single amino group on the phenyl group are tested as well as the compounds with the disubstituted phenyl group so that the evidence is commensurate with the scope of claim 11.

For the foregoing reasons it is respectfully submitted that new claims 11 to 20 are not obvious under 35 U.S.C. 103 (a) over the disclosures in DE 200 13 156 U1 (DE '156) and also the disclosures in PCT/FR 02/02397.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549 4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,



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